INDEX FOR VOLUME 25

Adams, L., *see* Mosby, H. S., 325
Age determination methods: epiphyseal cartilage, squirrels, 90
outer primaries, rock ptarmigan, 337
primary molt, chukar, 84
Age, determination of: partridge, chukar, 84
rabbit, swamp, 273
squirrels, fox and gray, 90
Alkon, P. U. Nutritional and acceptability values of hardwood slash as winter deer browse, 77
Allen, S. W. An introduction to American forestry. Third edition (reviewed), 216
Conserving natural resources: principles and practice in a democracy (reviewed), 106
Anderson, C. F. Anesthetizing deer by arrow, 202
Arizona: peccary foods and feeding, 248
white-tailed deer foods, 404
Atwood, E. L., *see* Geis, A. E., 154

Baker, M. F., *see* Hungerford, K. E., 325
Balser, D. S., *see* Morse, M. A., 148
Banding and marking: hare, mountain, 329
opossum, young, 20
Banding and marking methods: collars for hares, 329
toe removal, pouch young of opossum, 21
Baskett, T. S., *see* Frankel, A. I., 372
Baumgartner, F. M. (review of) O. Heinroth and K. Heinroth. The birds, 220
See also Hickey, J. J., 322
Bear, black: estimation of weight, 93
Beaver: effects on trout, 221
Beaver dams: effects on trout, 221
Behavior: elephant, in Uganda, 142
foxes, to calling, 153
Bendell, J. F., *see* Hungerford, K. E., 325
Benson, D. A., *see* Hickey, J. J., 322
Bergerud, A. T. Sex determination of caribou calves, 205
Berst, A. H., *see* McCrimmon, H. R., 168
Bird, R. D. (editor). Ecology of the aspen parkland of western Canada in relation to land use (reviewed), 445
Bobwhite: edge types and abundance, Illinois, 71
fall populations, Illinois, 73
food consumption in pens, 258
management, 75
Bourlière, F., and J. Verschuren. Introduction à l'écologie des ongules du Parc National Albert (reviewed), 217
Bradford, A. D., *see* Fortmann, H. R., 391
Brakhage, G. K., *see* Martinson, R. K., 271
Brandborg, S. Report of Code of Ethics Committee, 318
Brower, D. (editor). The meaning of wilderness to science (reviewed), 449
Brown, J. H., Jr., *see* Gould, W. P., 342
Brown, L. N. Excreted dyes used to determine movements of cottontail rabbits, 199
Browse, value of hardwood slash for deer, 77
Buckley, J. L. (review of) L. Crisler. Arctic wild, 220
See also Hickey, J. J., 322
Buechner, H. K. Report of Committee on African Wildlife, 318
(Review of) Ecology of the aspen parkland of western Canada in relation to land use (edited by R. D. Bird.), 445
Buss, I. O. Some observations on food habits and behavior of the African elephant, 131
Buss, K., *see* Fortmann, H. R., 391

Cahalane, V. H., *see* Buechner, H. K., 318
Cain, S. A., and G. M. DeOliveira Castro. Manual of vegetation analysis (reviewed), 215
California: effects of beaver on trout, 221
Caribou: sex determination of calves, 205
Carson, J. D. Epiphyseal cartilage as an age indicator in fox and gray squirrels, 90
Census: fish in warm-water stream, 1
opossum, 20
Census methods: electrofishing in warm-water stream, 1
opossum, 21
Christian, C. S., *see* Keast, A., 107
Clarke, C. H. D. Obituary of W. J. K. Harkness, 103
See also Hickey, J. J., 322
Clements, R. C. (editor). A gathering of shorebirds. By H. M. Hall (reviewed), 448
Cochran, G. A., and H. J. Stains. Deposition and decomposition of fecal pellets by cottontails, 432
Cockrum, E. L. The recent mammals of Arizona/ their taxonomy and distribution (reviewed), 450
Colwell, R. N. (editor). Manual of photographic interpretation (reviewed), 345
Conaway, C. H., *see* Wight, H. M., 87
Cooper, C. F. (review of) S. A. Cain and G. M. DeOliveira Castro. Manual of vegetation analysis, 215
(review of) E. A. Phillips. Methods of vegetation study, 215
Cope, O. B., *see* Gottschalk, J. S., 322
Cottam, C. (review of) R. T. Peterson. A field guide to the birds of Texas, 105
Cottontail, *see* Rabbit, cottontail
Couch, A. B., Jr., B. Grabstald, and K. J. Kimbrough. Collecting louseflies from mourning doves, 440
Cover: related to pheasant hunting success, 441
Cowan, I. McT., *see* Mosby, H. S., 325
See also Wood, A. J., 295
Cowan, R. L., *see* Long, T. A., 94
Craighead, F. C., *see* Mosby, H. S., 325
Craighead, J. J., and D. S. Stockstad. Evaluating the use of aerial nesting platforms by Canada geese, 363
Crisler, L. Arctic wild (reviewed), 220

Crocker, R. L., *see* Keast, A., 107
Culbreath, J. C., *see* Shomon, J. J., 318
Curry-Lindahl, K. (review of) D. Müller-Using. Grosstier und Kulturlandschaft im mitteleuropäischen Raum, 214
(review of) V. Marcstrom. Studies on the physiological and ecological background to the reproduction of the capercaillie (*Tetrao urogallus* Lin.), 213
(review of) H. Schouteden. De Vogels van Belgisch Congo en van Ruanda-Urundi, 348

Dale, F. H. Research problems in wildlife administration, 265
Damage by: game, in Poland, 360
Dambach, C. A. Report of Committee on Cooperative Relations with American Fisheries Society, 319
Dams: creating trout habitat, 384
Darling, F. F. Wildlife in an African territory (reviewed), 343
Dasmann, R. F. Environmental conservation (reviewed), 218
Davis, D. E., *see* Hickey, J. J., 322
See also Mosby, H. S., 325
Davis, R. K., *see* Shomon, J. J., 318
Davis, W. B. (review of) E. L. Cockrum. The recent mammals of Arizona/their taxonomy and distribution, 450
Deer: winter browse, 342
Deer, black-tailed: immobilized by arrow, 202
Deer, mule: fetal rates, 58
ovulation rates, 58
range condition and productivity, 54
weights, 57
Deer, white-tailed: fawns, feeding, 94
rearing, 66
foods in southern Arizona, 404
hardwood slash as browse for, 77
immobilized by nicotine dart, 102
milk compared, 66
composition, 68
deVos, A., *see* Mosby, H. S., 325
Dillon, O. W., Jr. Mourning dove foods in Texas during September and October, 334
Diseases and parasites: louseflies on dove, mourning, 440
pox, in dove, mourning, 211
of snowshoe hares in Newfoundland, 409
Dodds, D. G., and J. S. Mackiewicz. Some parasites and diseases of snowshoe hares in Newfoundland, 409
Dorney, R. S., *see* Hungerford, K. E., 325
Douglass, D. W. (review of) H. Mayfield. The Kirtland's warbler, 444
Dove, mourning: collecting louseflies from, 440
effect of pairing on cooing, 372
foods in Texas, 334
migrational homing, 61
pox in United States, 211
Drug: nicotine, 101, 326
strychnine for redwings, 96
succinylcholine chloride, 303
Duerr, W. A. Fundamentals of forest economics (reviewed), 448
Dyes: excreted by cottontails, 199

Eadie, W. R., *see* Howard, W. E., 319
Eckstein, O., *see* Krutilla, J. V., 103
Ecology: tree cavities and ground burrows, 12
Eddy, T. A. Foods and feeding patterns of the collared peccary in southern Arizona, 248
Edge: types for bobwhite, Illinois, 71
Electrofishing: success in warm-water stream, 1
Elephant, African: food habits and behavior, 131
Elk: harvest in Montana, 415
Ellis, J. A. Consumption of some food items by pen-reared bobwhites, 258
Errington, P. L. An American visitor's impressions of Scandinavian waterfowl problems, 109

Faulkner, L. R. (review of) J. N. Sasser and W. R. Jenkins. Nematology, 446
Feeding: deer fawns, white-tailed, 66, 94
Feeding habits: peccary, Arizona, 252
Fish: parasite tags for, 41
population in warm-water stream, 1
trout, affected by beaver, 221
winterkill, in Michigan lakes, 288
Fishing: trout, analysis of, 168
Florida: monocotyledons at Cedar Key, 178
Food habits: elephant, in Uganda, 134
Foods: dove, mourning, Texas, 334
grouse, blue, in winter, 209
milk substitutes for fawns, 66, 301
peccary, in Arizona, 248
rations for captive deer, 302
trout, in beaver ponds, 225
in stream areas, 225
white-cedar for deer, 342
Fortmann, H. R., K. Buss, A. S. Hazzard, and A. D. Bradford. The relation of feeding before stocking to catchability of trout, 391
Foxes: hunted by calling, 148
Frankel, A. I., and T. S. Baskett. The effect of pairing on cooing of penned mourning doves, 372
Fredine, C. G. Minutes of Wildlife Society council meeting, September 14, 1960, 82; March 5, 1961, 313
minutes of Wildlife Society annual business meeting, 316
report of executive secretary for 1960–61, 310
Fuller, W. A., *see* Hickey, J. J., 322

Gard, R. Creation of trout habitat by constructing small dams, 384
Effects of beaver on trout in Sagehen Creek, California, 221
Geis, A. D., and E. L. Atwood. Proportion of recovered waterfowl bands reported, 154
Golley, F. B. Effect of trapping on adrenal activity in *Sigmodon*, 331
Goose, Canada: use of aerial nesting platforms, 363

Gottschalk, J. S. Report of Fisheries Publication Award Committee, 322
Gould, W. P., and J. H. Brown, Jr. Atlantic white-cedar as a winter deer browse, 342
Grabstald, B., *see* Couch, A. B., Jr., 440
Griffith, R. E., *see* Hickey, J. J., 322
Grit: selection by female pheasant, 339
Grouse, blue: winter food quality, 209
Grouse, ruffed: technique for winter trapping, 428
Gullion, G. W. A technique for winter trapping of ruffed grouse, 428
Gunter, G. (review of) Marine biology (edited by B. N. Nikitin.), 219
(review of) C. M. Yonge. Oysters, 342
Guthrie, J. A. (review of) W. A. Duerr. Fundamentals of forest economics, 448
Gysel, L. W. An ecological study of tree cavities and ground burrows in forest stands, 12

Hall, H. M. A gathering of shorebirds (edited by R. C. Clements.) (reviewed), 448
Hansen, H. A. Loss of waterfowl production to tide floods, 242
(review of) A gathering of shorebirds, 448
Hanson, W. R., and R. J. Miller: Edge types and abundance of bobwhites in southern Illinois, 71
See also Norton, H. W., 398
Hare, mountain: collars for marking, 329
Hare, snowshoe: parasites and diseases, 409
Harkness, W. J. K. Obituary of, 103
Harris, S. W. Migrational homing in mourning doves, 61
Harvest: elk in Montana, 415
wildlife in Poland, 353
Hazzard, A. S., *see* Fortmann, H. R., 391
Heinroth, K., *see* Heinroth, O., 220
Heinroth, O., and K. Heinroth. The birds (reviewed), 220
Hendrickson, G. O. Obituary of, 352
Herring: parasite tags for, 42
Hewson, R. Collars for marking mountain hares, 329
Hickey, J. J. Report of Committee on Professional Training and Employment, 322
Hochbaum, H. A. The canvasback on a prairie marsh. Second edition (reviewed), 219
Hoffman, R. S. The quality of the winter food of blue grouse, 209
Holten, J. W., *see* Martinson, R. K., 271
Home range: mink, Montana, 50
Howard, W. E. Report of Committee on Economic Losses Caused by Vertebrates, 319
(review of) A. Keast, R. L. Crocker, and C. S. Christian (editors). Biogeography and ecology in Australia, 107
Hungerford, K. E. Report of Terrestrial Wildlife Publication Award Committee, 325
Hunting: methods in Poland, 356
pheasant, success related to cover, 421
waterfowl, rights leased, 204
Hunting methods: fox calling, 148
in Poland, 355
Hunting regulations: in Poland, 357

Illinois: attempts to establish Japanese quail, 290
quail, bobwhite, 71
raccoons, lead in livers, 160
Immobilization: deer, black-tailed, with arrow syringe, 202
deer, white-tailed, with nicotine, 101
moose, with nicotine, 326
ungulates, with succinylcholine chloride, 303
Iulo, W. (review of) J. V. Krutilla and O. Eckstein. Multiple purpose river development, 103

Jenkins, W. R., *see* Sasser, J. N., 446
Jessen, R. L., *see* Lindmeier, J. P., 430
Johnson, O. W. (review of) H. A. Hochbaum. The canvasback on a prairie marsh (second edition), 219
Jones, D. A., *see* Julander, O., 54
Julander, O., W. L. Robinette, and D. A. Jones. Relation of summer range condition to mule deer herd productivity, 54

Keast, A., R. L. Crocker, and C. S. Christian. Biogeography and ecology in Australia (reviewed), 107
Kimbrough, K. J., *see* Couch, A. B., Jr., 440
Klimstra, W. D., *see* Hickey, J. J., 322
See also Norton, H. W., 398
Kozicky, E., *see* Madson, J., 352
Kozlowski, T. T., *see* Kramer, P. J., 349
Kramer, P. J., and T. T. Kozlowski. Physiology of trees (reviewed), 349
Krutilla, J. V., and O. Eckstein. Multiple purpose river development (reviewed), 103

Labisky, R. F. Report of attempts to establish Japanese quail in Illinois, 290
Lamprey, H. F., *see* Talbot, L. M., 303
Larimore, R. W. Fish population and electrofishing success in a warm-water stream, 1
See also Gottschalk, J. S., 322
Lee, J. O., *see* Howard, W. E., 319
Leitch, W. G., *see* Howard, W. E., 319
Leonard, J., *see* Dambach, C. A., 319
Lindmeier, J. P., and R. L. Jessen. Results of capturing waterfowl in Minnesota by spotlighting, 430
Lindsey, J. S. Obituary of L. M. Llewellyn, 351
Llewellyn, L. M. Obituary of, 351
Locke, L. N. Pox in mourning doves in the United States, 211
Long, T. A., R. L. Cowan, C. W. Wolfe, and R. W. Swift. Feeding the white-tailed deer fawn, 94
Longhurst, W. M., *see* Buechner, H. K., 318
Lord, R. D., Jr. Magnitudes of reproduction in cottontail rabbits, 28
Mortality rates of cottontail rabbits, 33

Seasonal changes in roadside activity of cottontail rabbits, 206
Lyon, L. J. Evaluation of the influences of woody cover on pheasant hunting success, 421

MacDonald, D. Hunting season weights of New Mexico wild turkeys, 442
Mackiewicz, J. S., *see* Dodds, D. G., 409
Madson, J., and E. Kozicky. Obituary of G. O. Hendrickson, 352
Mair, W., *see* Dambach, C. A., 319
Major, J. (review of) N. Polunin. Introduction to plant geography, 346
Management: aerial platforms for Canada goose, 371
bobwhite, Illinois, 75
of wild ungulates for experiments, 295
Marcstrom, V. Studies on the physiological and ecological background to the reproduction of the capercaillie (*Tetrao urogallus* Lin.) (reviewed), 213
Martin, A. C., *see* Mosby, H. S., 325
Martinson, R. K., J. W. Holten, and G. K. Brakhage. Age criteria and population dynamics of the swamp rabbit in Missouri, 271
Matzke, E. B. (review of) E. T. Wherry. The fern guide, 445
Mayfield, H. The Kirtland's warbler (reviewed), 444
McCrimmon, H. R., and A. H. Berst. An analysis of sixty-five years of fishing in a trout pond unit, 168
Michigan: winter circulation in lakes, 282
Migration: homing, doves, mourning, 61
of trout, related to beaver dams, 238
Miller, C. I. (review of) S. A. Allen. An introduction to American forestry. Third edition, 216
(review of) R. N. Colwell (editor). Manual of photographic interpretation, 345
Miller, R. J., *see* Hanson, W. R., 71
Mink: movements, Montana, 48
Minnesota: capturing waterfowl by spotlighting, 430
waterfowl hunting rights leased, 204
Missouri: rabbit, cottontail, 87
rabbit, swamp, age and population study, 271
Mitchell, J. L. Mink movements and populations on a Montana river, 48
Molt: turkey, wing of yearling, 439
Montana: harvest of elk, 415
movements of mink, 48
Montgomery, G. G. A modification of the nicotine dart capture method, 101
Moose: immobilization with nicotine, 326
Morse, M. A., and D. S. Balser. Fox calling as a hunting technique, 148
Mortality: of goslings leaving aerial nests, 370
rabbit, swamp, 278
winterkill of fish, 288
Mosby, H. S. Report of Techniques Manual Committee, 325
Movement: doves, mourning, migrational homing, 61
mink, in Montana, 48
rabbit, cottontail, 199
Müller-Using, D. Grosstier und Kulturlandschaft im mitteleuropäischen Raum (reviewed), 214

Nagel, W. O., *see* Shomon, J. J., 318
Nesting: Canada geese on aerial platforms, 363
experiments with coturnix quail, 99
waterfowl, Copper River Delta, 244
Newfoundland: parasites and diseases of snowshoe hares, 409
New Mexico: turkey weights in hunting season, 442
Nicotine: immobilization of deer, 101
moose, 326
Nikitin, B. N. (editor). Marine biology (reviewed), 219
Nordan, H. C., *see* Wood, A. j., 295
Norton, H. W., T. G. Scott, W. R. Hanson, and W. D. Klimstra. Whistling-cock indices and bobwhite populations in autumn, 398

Obituaries: Harkness, W. J. K., 103
Hendrickson, G. O., 352
Llewellyn, L. M., 351
Oliveira Castro, G. M. De, *see* Cain, S. A., 215
Opossum: population estimated, 20
Österlöf, B. Viltvård av i dag, Amerikanska intryck (Wildlife management of today, American travel) (reviewed), 104

Parasites: of hares, snowshoe, in Newfoundland, 409
as tags for marine fish, 41
See also Diseases and parasites
Partridge, chukar: age classification, 84
Patriarche, M. H. Air-induced winter circulation of two shallow Michigan lakes, 282
Patrick, N. D. Estimating total weights of black bears from carcass weights, 93
Peccary: foods and feeding pattern, 248
Peterson, R. T. A field guide to the birds of Texas (reviewed), 105
Petrides, G. A. (review of) F. Bourlière and J. Verschuren. Introduction à l'écologie des ongules du Parc National Albert, 217
See also Buechner, H. K., 318
Pheasant: hunting success related to cover, 421
selection of grit by female, 339
Phillips, E. A. Methods of vegetation study (reviewed), 215
Physiology: adrenal, in cotton rat, 331
Picton, H. D. Differential hunter harvest of elk in two Montana herds, 415
Plants: monocotyledons in Florida, 178
pondweed, sago: growth, 436
Poison: strychnine, control for redwings, 96
Poland: wildlife administration and harvest, 353
Polunin, N. Introduction to plant geography (reviewed), 346
Pondweed, sago: growth related to water conditions, 436

Poole, D. A., *see* Hickey, J. J., 322
Population estimates, *see* Census
Population turnover: rabbit, swamp, 277
Populations: mink, Montana, 51
rabbit, swamp, 277
trout, 235
Predation: on Scandinavian waterfowl, 120
Productivity: deer, mule, 57
Provost, E. E. (review of) S. W. Allen. Conserving natural resources: principles and practice in a democracy, 106
(review of) R. F. Dasmann. Environmental conservation, 218
Ptarmigan, rock: indicators of age, 337

Quail, bobwhite: edgetypes and abundance, 71
whistling indices evaluated, 398
Quail, coturnix: nesting study, 99
Quail, Japanese: attempts to establish, Illinois, 290
Quick, H. F., *see* Mosby, H. S., 325

Rabbit, cottontail: breeding in Missouri, 87
fecal pellets, 432
life table, 38
mortality rates, 33
movements determined by dyes, 199
reproduction, magnitudes of, 28
roadside activity, 206
Rabbit, swamp: age and population study, Missouri, 271
age criteria, 273
hunting mortality, 278
juvenile breeding, 278
longevity and turnover, 277
sex and age ratios, 276
Raccoon: lead in livers, Illinois, 160
Rat, cotton: effect of trapping on adrenal, 331
Rations: formulated for captive deer, 301
Rausch, R. A., and R. W. Ritcey. Narcosis of moose with nicotine, 326
Redwing: strychnine control for, 96
Reproduction: mink, Montana, 52
rabbit, cottontail, 28, 87
Research, wildlife: problems in administration, 265
Ricker, W. E., *see* Gottschalk, J. S., 322
Riney, T. (review of) F. F. Darling. Wildlife in an African territory, 345
Ritcey, R. W., *see* Rausch, R. A., 326
Robel, R. J. Water depth and turbidity in relation to growth of sago pondweed, 436
Robinette, W. L., *see* Julander, O., 54
Robinson, W. B., *see* Howard, W. E., 319
Ruhl, H. D., *see* Hickey, J. J., 322

Sadler, K. C. Grit selectivity by the female pheasant during egg production, 339
Saila, S., *see* Gottschalk, J. S., 322
Salinas, J., *see* Brandborg, S., 318
Sanderson, G. C. Estimating opossum populations by marking young, 20
Sanderson, G. C., and R. M. Thomas. Incidence of lead in livers of Illinois raccoons, 160
Sasser, J. N., and W. R. Jenkins (editors). Nematology (reviewed), 446
Schouteden, H. De Vogels van Belgisch Congo en van Ruanda–Urundi (reviewed), 348
Scott, T. G., *see* Hickey, J. J., 322
See also Norton, H. W., 398
Seubert, J. L., *see* Brandborg, S., 318
Sevringhaus, C. W., *see* Hungerford, K. E., 325
Sex determination: caribou calves, 205
Sex ratio: opossum, pouch young, 24
rabbit, swamp, 276
Shomon, J. J. Report of Conservation Education Reward Committee, 318
Silver, H. Deer milk compared with substitute milk for fawns, 66
Simon, N. M., *see* Buechner, H. K., 318
Sindermann, C. J. Parasite tags for marine fish, 41
Smith, R. H. Age classification of the chukar partridge, 84
Snyder, D. B. Strychnine as a potential control for redwinged blackbirds, 96
Spencer, D. A., *see* Howard, W. E., 319
Squirrel, fox: age indicator for, 90
Squirrel, gray: age indicator for, 90
Stains, H. J., *see* Cochran, G. A., 432
Stebler, A. M., *see* Hickey, J. J., 322
Stevens, V. C. Experimental study of nesting by coturnix quail, 99
Stockstad, D. S., *see* Craighead, J. J., 363
Strawn, K. Factors influencing the zonation of submerged monocotyledons at Cedar Key, Florida, 178
Succinylcholine chloride: ungulates immobilized by, 303
Swift, R. W., *see* Long, T. A., 94

Taber, R. D. (review of) E. Ueckermann. Wildstandbewertschaftung und Wildschadenverhütung beim Rotwild (Wildlife management and damage prevention for the red deer), 447
Wildlife administration and harvest in Poland, 353
See also Mosby, H. S., 325
Talbot, L. M., and H. F. Lamprey. Immobilization of free-ranging East African ungulates with succinylcholine chloride, 303
Taylor, W. P., awarded Leopold medal, 317
Technique for: age determination, chukar, 86
ptarmigan, rock, 337
squirrels, 90
Techniques, miscellaneous:
air for circulation of lakes, 282
capturing waterfowl by spotlighting, 430
collecting louseflies from doves, 440
dyes for rabbit feces, 199
handling immobilized animals, 304
immobilizing ungulates, 202, 304
marking hares with collars, 329
marking pouch young of opossum, 21
modified nicotine dart, 101
rabbit movements determined, 199
sex determination, caribou calves, 205

trapping, grouse, ruffed, 428
Texas: mourning dove foods, 334
Thomas, R. M., *see* Sanderson, G. C., 160
Trapping: adrenal effects in cotton rat, 331
Trapping methods: grouse, ruffed, in winter, 428
Trefethen, J. B., *see* Shomon, J. J., 318
Trout: affected by beaver, 221
catchability after stocking, 391
effect of feeding on catchability, 396
fishing, analysis of, 168
habitat created, 384
stocked, responses to bait, 393
Trout, brook: growth, 388
survival and spawning, 386
Turbidity: effects on pondweed, 436
Turkey: weights, hunting season, 442
wing molt in yearlings, 439

Ueckermann, E. Wildstandbewertschaftung und Wildschadenverhütung beim Rotwild (Wildlife management and damage prevention for the red deer) (reviewed), 447
Uhlig, H. G. Survey of leased waterfowl hunting rights in Minnesota, 204
Ungulates: immobilization by succinylcholine chloride, 303

Verschuren, J., *see* Bourlière, F., 217

Wade, D. E., *see* Shomon, J. J., 318
Walker, E. A., *see* Hickey, J. J., 322
Water depth, and pondweed growth, 436
Waterfowl: band recovery study, 154
captured by spotlighting, 430
hunting rights leased, 204
problems in Scandinavia, 109
production loss to tide floods, 242
Weather effects on: cottontail breeding, Missouri, 87
Webb, W. L. (review of) B. Österlöf. Viltvård av i dag, Amerikanska intryck (Wildlife management of today, American travel), 104
Weeden, R. B. Outer primaries as indicators of age among rock ptarmigan, 337
(review of) D. Brower. The meaning of wilderness to science, 449
Weights and measurements: bear, black, 93
deer, mule, 57
mink, in Montana, 53
turkey, in New Mexico, 442
Westing, A. H. (review of) P. J. Kramer and T. T. Kozlowski. Physiology of trees, 349
Wherry, E. T. The fern guide (reviewed), 445
White, R. W. Some foods of the white-tailed deer in southern Arizona, 404
Wight, H. M., and C. H. Conaway. Weather influences on the onset of breeding in Missouri cottontails, 87
Wildlife Society: annual reports of committees, 317
minutes of annual business meeting, 316
minutes of council meeting, September 14, 1960, 82; March 5, 1961, 313
nominations for officers, 1962–63, 456
report of executive secretary for 1960–61, 310
special report of the 1958–59 Employment Committee. Training and employment of wildlife biologists and fishery biologists, 190
Williams, L. E., Jr. Notes on wing molt in the yearling wild turkey, 439
Wolfe, C. W., *see* Long, T. A., 94
Wood, A. J., H. C. Nordan, and I. McT. Cowan. The care and management of wild ungulates for experimental purposes, 295

Yonge, C. M. Oysters (reviewed), 342

THE WILDLIFE SOCIETY
NOMINATIONS FOR OFFICERS, 1962–63

President ..... W. C. Glazener
Wendell G. Swank

Vice-president ..... John J. Craighead
Lyle K. Sowls

Regional Representatives

Region 1 ..... Malcolm W. Coulter
Ward M. Sharp

Region 2 ..... Dan M. Russell
Harold E. Wallace

Region 3 ..... Winston A. Elkins
Tony J. Peterle

Region 4 ..... Robert L. Eng
Lee E. Yeager

Region 5 ..... A. M. Stebler
John E. Wood

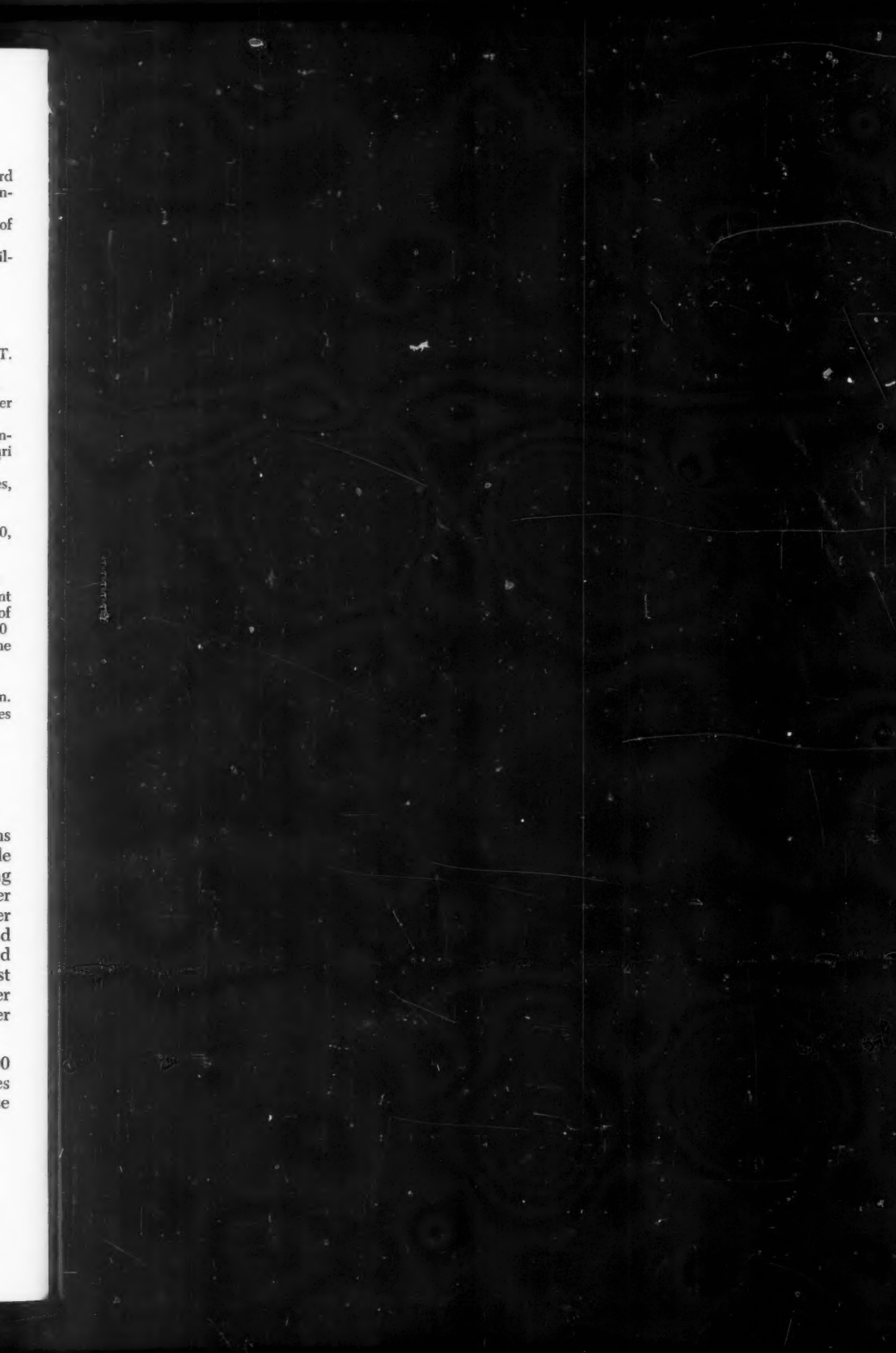
Region 6 ..... Kenneth E. Hungerford
William M. Longhurst

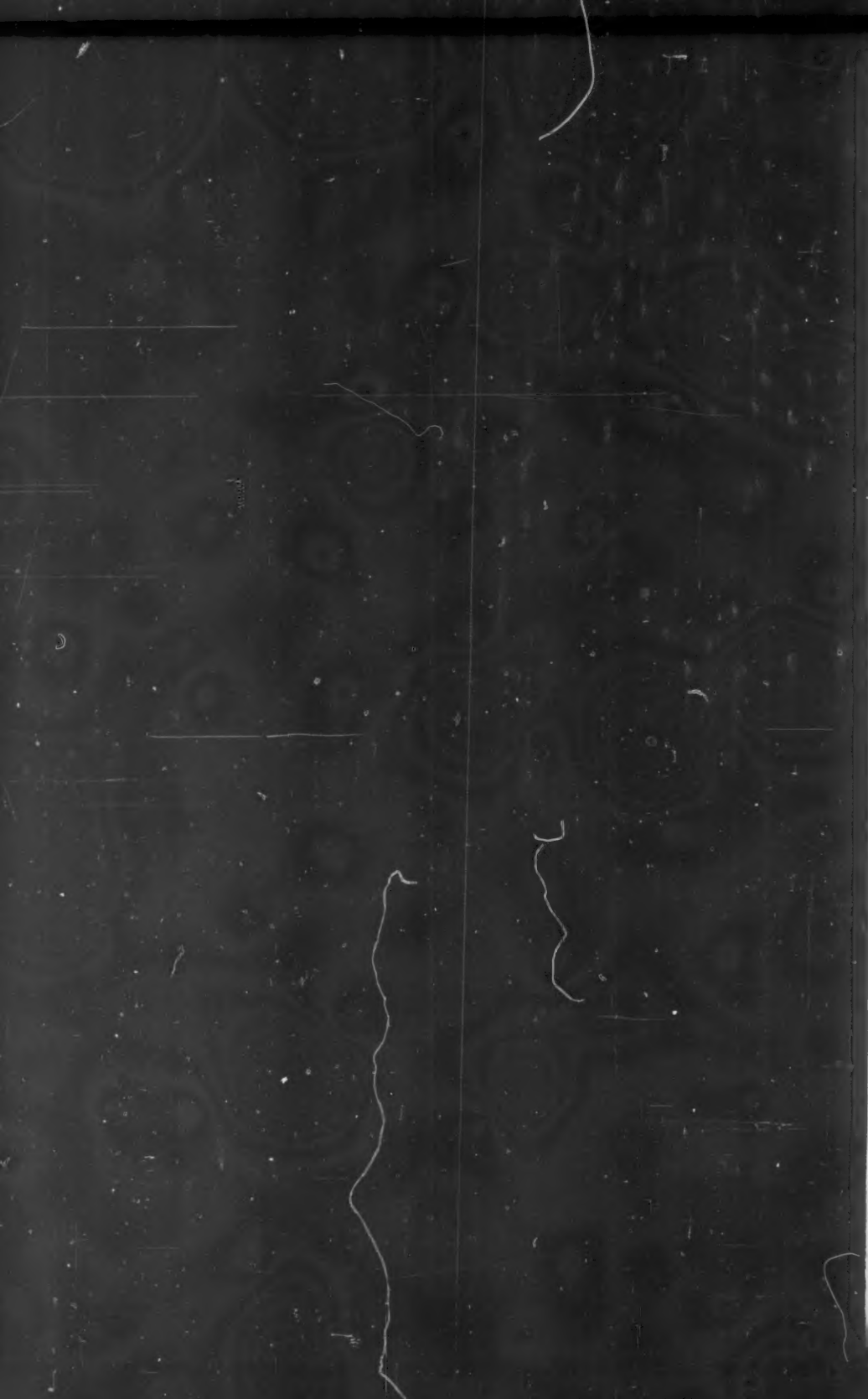
Region 7 ..... Thomas A. Harper
James Hatter

NOTICE TO SUBSCRIBERS

The subscription rate for THE JOURNAL OF WILDLIFE MANAGEMENT will be $10.00 for the calendar year 1962 (Volume 26). Subscriptions will continue to include all issues of WILDLIFE MONOGRAPHS published during the year. To ensure prompt delivery, please renew subscriptions before December 31, 1961. Send remittance in U. S. dollars to:

The Wildlife Society
2000 P Street, N. W.
Washington 6, D. C.





THE JOURNAL OF WILDLIFE MANAGEMENT

VOLUME 25

Charles M. Kirkpatrick, *Editor*
Department of Forestry and Conservation, Purdue University

Frank F. Hooper, *Associate Editor*
Institute for Fisheries Research, Michigan Department of Conservation

Helmut K. Buechner, *Review Editor*
Department of Zoology, Washington State University

EDITORIAL BOARD

Thomas S. Baskett, Missouri Coop. Wildlife Research Unit
George W. Bennett, Illinois Natural History Survey
Irven O. Buss, Washington State University
William B. Davis, Texas A. and M. College
William H. Elder, University of Missouri
F. N. Hamerstrom, Jr., Wis. Cons. Dept.
Don W. Hayne, Michigan Conservation Dept.
George H. Kelker, Utah State University
Edward L. Kozicky, Olin Mathieson Chemical Corp.
William L. Jellison, National Microbiological Institute
Robert L. Rausch, Arctic Health Research Center
Thomas G. Scott, Illinois Natural History Survey
C. W. Sevringhaus, New York State Cons. Dept.
Richard D. Taber, Montana State University
W. L. Webb, New York State Univ. Coll. of Forestry

Published by
THE WILDLIFE SOCIETY
at
THE ALLEN PRESS
LAWRENCE, KANSAS

1961

THE WILDLIFE SOCIETY, 1961–62

Officers

President: E. L. Cheatum, New York State Conservation Department, Albany 1, New York.
Vice-President: Jack H. Berryman, Utah State University, Logan, Utah.
Past President: Charles A. Dambach, Natural Resources Inst., Ohio State Univ., Columbus 10, Ohio.
Executive Secretary: C. Gordon Fredine, 5921 Anniston Road, Bethesda 14, Maryland.

Regional Representatives

Malcolm W. Coulter (Region 1, northeast), 121 E. Annex, University of Maine, Orono, Maine.
Leslie L. Glasgow (Region 2, southeast), Louisiana State Univ., School of Forestry, Baton Rouge, La.
Bill T. Crawford (Region 3, north central), Missouri Conservation Commission, Columbia, Missouri.
Lee E. Yeager (Region 4, northern great plains), Colorado A. & M. College, Fort Collins, Colorado.
Wendell G. Swank (Region 5, southwest), 1219 W. Hayward, Phoenix 21, Arizona.
Jessop B. Low (Region 6, far west), Utah State Agricultural College, Logan, Utah.
C. David Fowle (Region 7, Canada), York University, Toronto 5, Ontario, Canada.

Trustees

Arnold L. Nelson, 1962; C. R. Gutermuth, 1963; Joseph P. Linduska, 1964.

Committees

African Wildlife: Helmut K. Buechner, Chairman; Victor H. Cahalane, William M. Longhurst, George A. Petrides, Noel Simon (advisor in Kenya, East Africa).
Audit and Elections: Winston E. Banko, Chairman; David M. Gaufin, Robert M. Paul.
Code of Ethics: Stewart M. Brandborg, Chairman; James C. Salinas, John L. Seubert.
Conservation Education Award: James Trefethen, Chairman; Harlan Brumsted, Werner O. Nagel, Douglas E. Wade, Ted Petit.
Constitution and Bylaws: Ralph Hill, Chairman; Daniel L. Leedy, Justin W. Leonard, A. Starker Leopold, George A. Petrides.
Cooperation with the American Fisheries Society: Charles A. Dambach, Chairman; Justin W. Leonard, W. Winston Mair.
Economic Losses Caused by Vertebrates: W. E. Howard, Chairman; W. Robert Eadie, James O. Lee, Wm. G. Leitch, Weldon B. Robinson.
Fisheries Publication Award: Saul Saila, Chairman; Oliver Cope, Karl F. Lagler, Weldon Larimore, Paul R. Needham.
History of the Wildlife Society: E. R. Kalmbach, Chairman; W. L. McAtee, Tracy I. Storer.
Leopold Medal Award: Clarence Cottam, Chairman; Durward L. Allen, A. Starker Leopold, Harrison F. Lewis, Hoyes Lloyd, Olaus Murie.
Manual of Wildlife Techniques: Henry S. Mosby, Chairman; Lowell Adams, Ian McTaggart Cowan, Frank C. Craighead, David E. Davis, Antoon de Vos, Oliver H. Hewitt, Alexander C. Martin, Horace F. Quick, Richard D. Taber.
Membership: Wendell G. Swank, Chairman; Regional Representatives and State Chairmen.
Memorials: Leonard E. Foote, Chairman.
Nominations: Fred S. Barkalow, Jr., Chairman; C. H. D. Clarke, J. Burton Lauckhart, William Sheldon, John L. Seubert.
Preparation of Awards: John D. Findlay, Chairman.
Professional Training and Employment: J. V. K. Wagar, Chairman; Raymond F. Dasmann, George Petrides, Daniel Poole, William F. Sigler.
Relations with the Canadian Society of Wildlife and Fishery Biologists: David A. Munro, Chairman; Jack H. Berryman, Bill T. Crawford, Peter Larkin, W. Winston Mair.
Technical Sessions 27th North American Wildlife Conferences: Fred Dale, Chairman.
Terrestrial Wildlife Publication Award: Robert Dorney, Chairman; Maurice Baker, James Bendell, Philip Wright, C. W. Severinghaus.
Wild Turkey Monograph: James S. Lindzey, Chairman; John W. Aldrich, W. C. Glazener, Oliver H. Hewitt, Roger M. Latham, Henry S. Mosby.

Appointed Representatives

To *Council of the American Association for the Advancement of Science*: David E. Davis.
To *International Council for Bird Preservation*: Hoyes Lloyd.
To *International Union for Conservation of Nature*: Irven O. Buss.
To *International Wildlife Biologists Congress*: Antoon de Vos.
To *National Research Council*: Fred H. Dale.
To *National Watershed Congress*: Robert J. Smith.
To *Waterfowl Advisory Committee*: Joseph P. Linduska.

Editors

Journal of Wildlife Management: Charles M. Kirkpatrick, Dept. of Forestry and Cons., Purdue Univ., Lafayette, Ind.
Wildlife Monographs: Louis A. Krumholz, Dept. of Biology, Univ. of Louisville, Louisville 8, Ky.
Wildlife Society News: Thomas R. Evans, Dept. of Conservation, Springfield, Ill.

CONTENTS FOR VOLUME 25

NUMBER 1 — JANUARY

Fish Population and Electrofishing Success in a Warm-water Stream — *R. Weldon Larimore* 1

An Ecological Study of Tree Cavities and Ground Burrows in Forest Stands — *Leslie W. Gysel* 12

Estimating Opossum Populations by Marking Young — *Glen C. Sanderson* 20

Magnitudes of Reproduction in Cottontail Rabbits — *Rexford D. Lord, Jr.* 28

Mortality Rates of Cottontail Rabbits — *Rexford D. Lord, Jr.* 33

Parasite Tags for Marine Fish — *Carl J. Sindermann* 41

Mink Movements and Populations on a Montana River — *James L. Mitchell* 48

Relation of Summer Range Condition to Mule Deer Herd Productivity — *Odell Julander, W. Leslie Robinette, and Dale A. Jones* 54

Migrational Homing in Mourning Doves — *Stanley W. Harris* 61

Deer Milk Compared with Substitute Milk for Fawns — *Helenette Silver* 66

Edge Types and Abundance of Bobwhites in Southern Illinois — *William R. Hanson and Ross J. Miller* 71

Nutritional and Acceptability Values of Hardwood Slash as Winter Deer Browse — *Philip U. Alkon* 77

The Wildlife Society

Minutes of the Wildlife Society Council Meeting, September 14, 1960 — 82

Briefer Articles—Age Classification of the Chukar Partridge, by *Ronald H. Smith*; Weather Influences on the Onset of Breeding in Missouri Cottontails, by *Howard M. Wight and Clinton H. Conaway*; New Use of Funnel Trap for Ruffed Grouse Broods, by *Malcolm G. Edwards*; Epiphyseal Cartilage as an Age Indicator in Fox and Gray Squirrels, by *James D. Carson*; Estimating Total Weights of Black Bears from Carcass Weights, by *N. D. Patrick*; Feeding the White-tailed Deer Fawn, by *T. A. Long, R. L. Cowan, C. W. Wolfe, and R. W. Swift*; Strychnine as a Potential Control for Redwinged Blackbirds, by *Donald B. Snyder*; Experimental Study of Nesting by Coturnix Quail, by *Vernon C. Stevens*; A Modification of the Nicotine Dart Capture Method, by *G. G. Montgomery* — 84

Obituary — 103

Book Reviews — 103

Editorial Acknowledgment — 47

NUMBER 2 — APRIL

An American Visitor's Impressions of Scandinavian Waterfowl Problems, *Paul L. Errington* 109

Some Observations on Food Habits and Behavior of the African Elephant — *Irven O. Buss* 131

Fox Calling as a Hunting Technique — *Marius A. Morse and Donald S. Balser* 148

Proportion of Recovered Waterfowl Bands Reported — *Aelred D. Geis and Earl L. Atwood* 154

Incidence of Lead in Livers of Illinois Raccoons, *Glen C. Sanderson and Richard M. Thomas* 160

An Analysis of Sixty-five Years of Fishing in a Trout Pond Unit — *H. R. McCrimmon and A. H. Berst* 168

Factors Influencing the Zonation of Submerged Monocotyledons at Cedar Key, Florida — *Kirk Strawn* 178

The Wildlife Society

Training and Employment of Wildlife Biologists and Fishery Biologists — 190

Briefer Articles—Excreted Dyes Used to Determine Movements of Cottontail Rabbits, by *L. N. Brown*; Anesthetizing Deer by Arrow, by *Carl F. Anderson*; Survey of Leased Waterfowl Hunting Rights in Minnesota, by *Hans G. Uhlig*; Sex Determination of Caribou Calves, by *Arthur T. Bergerud*; Seasonal Changes in Roadside Activity of Cottontails, by *Rexford D. Lord, Jr.*; The Quality of the Winter Food of Blue Grouse, by *Robert S. Hoffmann*; Pox in Mourning Doves in the United States, by *Louis N. Locke* — 199

Book Reviews — 213

NUMBER 3 — JULY

Effects of Beaver on Trout in Sagehen Creek, California — *Richard Gard* 221

Loss of Waterfowl Production to Tide Floods — *Henry A. Hansen* 242

Foods and Feeding Patterns of the Collared Peccary in Southern Arizona ... *Thomas A. Eddy* 248
Consumption of Some Food Items by Pen-reared Bobwhites ... *Jack A. Ellis* 258
Research Problems in Wildlife Administration ... *Fred H. Dale* 265
Age Criteria and Population Dynamics of the Swamp Rabbit in Missouri ... *R. K. Martinson, J. W. Holten, and G. K. Brakhage* 271
Editorial Note ... 281
Air-induced Winter Circulation of Two Shallow Michigan Lakes ... *Mercer H. Patriarche* 282
Report of Attempts to Establish Japanese Quail in Illinois ... *Ronald F. Labisky* 290
The Care and Management of Wild Ungulates for Experimental Purposes ... *A. J. Wood, H. C. Nordan, and I. McT. Cowan* 295
Immobilization of Free-ranging East African Ungulates with Succinylcholine Chloride ... *Lee M. Talbot and Hugh F. Lamprey* 303
The Wildlife Society
Report of the Executive Secretary for the Year 1960–61 ... 310
Minutes of the Wildlife Society Council Meeting, March 5, 1961 ... 313
Minutes of the Annual Business Meeting, March 6, 1961 ... 316
Annual Reports of Wildlife Society Committees ... 317
Briefer Articles—Narcosis of Moose with Nicotine, by *Robert A. Rausch and Ralph W. Ritcey*; Collars for Marking Mountain Hares, by *Raymond Hewson*; Effect of Trapping on Adrenal Activity in *Sigmodon*, by *Frank B. Golley*; Mourning Dove Foods in Texas During September and October, by *Olan W. Dillon, Jr.*; Outer Primaries as Indicators of Age Among Rock Ptarmigan, by *Robert B. Weeden*; Grit Selectivity by the Female Pheasant During Egg Production, by *Kenneth C. Sadler*; Atlantic White-Cedar as a Winter Deer Browse, by *Walter P. Gould and James H. Brown, Jr.* ... 326
Book Reviews ... 342
Obituaries ... 351

NUMBER 4 — OCTOBER

Wildlife Administration and Harvest in Poland ... *Richard D. Taber* 353
Evaluating the Use of Aerial Nesting Platforms by Canada Geese ... *John J. Craighead and Dwight S. Stockstad* 363
The Effect of Pairing on Cooing of Penned Mourning Doves ... *Arthur I. Frankel and Thomas S. Baskett* 372
Creation of Trout Habitat by Constructing Small Dams ... *Richard Gard* 384
The Relation of Feeding before Stocking to Catchability of Trout ... *H. R. Fortmann, Keen Buss, A. S. Hazzard, and A. D. Bradford* 391
Whistling-cock Indices and Bobwhite Populations in Autumn ... *Horace W. Norton, Thomas G. Scott, William R. Hanson, and Willard D. Klimstra* 398
Some Foods of the White-tailed Deer in Southern Arizona ... *Robert W. White* 404
Some Parasites and Diseases of Snowshoe Hares in Newfoundland ... *Donald G. Dodds and John S. Mackiewicz* 409
Differential Hunter Harvest of Elk in Two Montana Herds ... *Harold D. Picton* 415
Evaluation of the Influences of Woody Cover on Pheasant Hunting Success ... *L. Jack Lyon* 421
Briefer Articles—A Technique for Winter Trapping of Ruffed Grouse, by *Gordon W. Gullion*; Results of Capturing Waterfowl in Minnesota by Spotlighting, by *John P. Lindmeier and Robert L. Jessen*; Deposition and Decomposition of Fecal Pellets by Cottontails, by *George A. Cochran and Howard J. Stains*; Water Depth and Turbidity in Relation to Growth of Sago Pondweed, by *Robert J. Robel*; Notes on Wing Molt in the Yearling Wild Turkey, by *Lovett E. Williams, Jr.*; Collecting Louseflies from Mourning Doves, by *Andrew B. Couch, Jr., B. Grabstald, and Kenneth J. Kimbrough*; Hunting Season Weights of New Mexico Wild Turkeys, by *Duncan MacDonald* ... 428
Editorial Note ... 435
Book Reviews ... 444
Notice to Contributors of Articles to The Journal of Wildlife Management ... 450
Index to Volume 25 ... 451
Nominations for Wildlife Society Officers, 1962–63 ... 456
Notice to Subscribers ... 456

y 248
llis 258
e 265
e 271
.. 281
e 282
y 290
n 295
y 303
.. 310
.. 313
.. 316
.. 317
;
l
r
k
g
y
.. 326
.. 342
.. 351
r 353
d 363
t 372
d 384
d 391
a 398
e 404
z 409
n 415
n 421
;
d
.
o
.
.
y
.. 428
.. 435
.. 444
.. 450
.. 451
.. 456
.. 456